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1 Pacific Bell provided its own TPI.

2 ALJ REED: Okay.

3 MR. SASSER: The request is made of Pacific Bell
4 and/or Dr. Christensen.

5 ALJ REED: Thank you, Mr. Sasser.]

6 THE WITNESS: I'm sorry. Is there a question
7 pending?

8 MR. FABER: Q Well, not -- probably. Let me try
9 and ask you a few questions about this.

10 You have Exhibit 8, Request 1, in front of
11 you?

12 A Yes.

13 Q And do you agree that what is attached to
14 Request 1 is a chart showing Pacific Bell's updated TPI
15 as of April the 12th, 1995?

16 A That's what it appears to be, yes.

17 Q Have you seen this before?

18 A I believe I have, yes.

19 Q When did you first get this document?

20 A I believe I received it shortly after it
21 was -- shortly before or after it was filed in response
22 to this data request.

23 Q Now in January, you submitted an update to the
24 FCC based on corrected information you had received in
25 the November-December time frame. Have you done any
26 update to your January study based on this new Pacific
27 Bell data?

28 A No, I have not.

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1 Q Have you received updated data since January
2 from any of the other LECs?

3 A No.

4 Q Now if you turn to this attachment to Request
5 No. 1 and you look at the central office category for
6 Pacific Bell, and I want to -- again, let's refer --
7 well, let's refer to the top one first with the one you
8 used in your study.

9 If you look at central office, Pacific Bell's
10 TPI decrease from 100 to 82.8, isn't that right?

11 A Yes.

12 Q That represents a 17.2 percent reduction in
13 the prices it was paying for central office equipment;
14 is that right?

15 A Is that a question?

16 Q Is that right?

17 A Yes, that's correct.

18 Q And that 17.2 percent reduction in central
19 office equipment is the same category of data that Bell
20 Atlantic shows your study as having increased by
21 49 percent; is that right?

22 A That's correct.

23 Q Now, I apologize for flipping back and forth,
24 but go back now to Exhibit 9, the Bell Atlantic page and
25 actually go to the page before it, corrected TPIs.
26 That's your composite; is that right?

27 A I'm not certain. It doesn't say on that page
28 "composite."

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1 MR. GOLABEK: For the record, can we get a
2 clarification of what page we're on now?

3 MR. FABER: Well, it's the 16th page of Exhibit 9.
4 It's the page immediately preceding the Bell Atlantic
5 telephone plant indices page that we were referring to a
6 moment ago.

7 THE WITNESS: It does appear that that's the
8 composite corrected TPI.

9 MR. FABER: Q If you look at the corrected TPIs
10 category for central office, the composite number went
11 down from 100 to 92.7; is that right?

12 A That's correct.

13 Q And that represents a reduction of 7.3
14 percent?

15 A It does.

16 Q And that is similarly the same category of
17 item that we saw for Pacific Bell reduced by 17.2
18 percent, an increase for Bell Atlantic by 49 percent; is
19 that right?

20 A That is correct.

21 Q Now do you have -- excuse me.

22 We asked you in the data request to explain
23 the anomalous TPI for central office equipment for Bell
24 Atlantic, did we not?

25 A I don't recall.

26 Q Why don't you turn for a moment to Request
27 No. 9. You're familiar with that request and the
28 response?

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1 A (Reviewing document)

2 Yes, I am.

3 Q And do you see the very first sentence of the
4 response?

5 A Yes, I do.

6 Q Would you read that for the record?

7 A Yes.

8 "Bell Atlantic was asked about the
9 value of their COE TPI's and they
10 verified the values of their COE
11 TPI's as being an accurate
12 reflection of prices the company
13 paid for central office equipment."

14 Q Now who asked Bell Atlantic about the accuracy
15 of their COE TPI?

16 A I did.

17 Q You personally did?

18 A No. I mean -- when I say "I," we who did the
19 study.

20 Q Do you know who in your company asked them?

21 A Yes, Dr. Meitzen.

22 Q And do you know who at Bell Atlantic provided
23 the statement that the values were accurate?

24 A I do not.

25 Q Do you know if Bell Atlantic provided any data
26 to Dr. Meitzen or your company to support it's assertion
27 that these values were an accurate reflection of prices
28 the company paid?

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1 A I believe they did not.

2 Q Do you have any reason sitting here one way or
3 the other to know if Bell Atlantic's assertions are
4 correct?

5 A No more than or no less than any of the other
6 LECs. I did not look at their accounting record.

7 Q You mentioned earlier that you applied a
8 sanity test or sanity check to certain of data
9 responses.

10 Did you apply a sanity check to these Bell
11 Atlantic's TPI?

12 A Well, their data for TPI obviously looked
13 different from those for other companies. And that was
14 a trigger for me to make a specific inquiry to make sure
15 there was no misunderstanding on Bell Atlantic's part as
16 to what these numbers were to reflect.

17 And they in fact responded that they had
18 double checked their accounting records and they indeed
19 did reflect what -- the time pattern of what they had
20 paid for central office equipment.

21 Q When did this get triggered in your mind, when
22 you received the updated information in
23 November-December?

24 A No. We asked about this when we did the
25 original study.

26 Q Because the Bell Atlantic's numbers were so
27 anomalous back then as well?

28 A I wouldn't say anomalous. They were different

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1 from the other numbers.

2 Q To the best of your knowledge, doesn't Bell
3 Atlantic purchase the same kind of central office
4 equipment as other LECs?

5 A Similar kinds I would think, yes.

6 Q To the best of your knowledge, doesn't it
7 probably purchase that from the same suppliers?

8 A Some of the same suppliers, sure.

9 Q So it surprised you that the prices Bell
10 Atlantic had paid for its COE had increased while the
11 other LECs appeared to have experienced price decreases
12 over the same period?

13 A That the time pattern was different, that's
14 correct.

15 Q Can you offer any theory or explanation as to
16 why this occurred?

17 A Sure. And as Dr. Schmalensee suggested
18 yesterday, this central office category is really a
19 mixture of -- conglomerate of various kinds of equipment
20 and the mix could be substantially different for Bell
21 Atlantic than for the other LECs.

22 But in addition, there's a very important
23 point that Dr. Schmalensee didn't mention yesterday, and
24 that is that these figures don't allow one to
25 distinguish the actual level of prices being paid. All
26 these figures tell you is how the prices changed over
27 time.

28 So if you look at the left of this table,

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1 these are all 100. That could be erroneously
2 interpreted as saying, well, in 1984, all the LECs were
3 paying the same price for central office equipment and
4 for all the other kinds of categories of capital
5 equipment. And we know that that's not true.

6 What this is is an indexed series that tell us
7 rates of change. And I think it's the most plausible
8 explanation of why Bell Atlantic's numbers were
9 increased so much more rapidly over this period than the
10 rest of the LECs, probably for whatever reason; had a
11 much higher price in 1984 than did the other LECs. And
12 so there's sort of a much lower price in '84, so they
13 experienced a higher rate of increase over this period
14 than the other LECs did.

15 Q Well, now, prior to 1984, where were all of
16 these LECs purchasing their central office equipment
17 from, the Bell LECs?

18 A Probably the bulk of them from Western
19 Electric.

20 Q Do you think they were paying different prices
21 to Western Electric?

22 A Possibly.

23 Q What do you base that on?

24 A Well, it's possible. I don't know what they
25 were paying.

26 Q Isn't it possible that they were paying the
27 same price?

28 A It's possible.

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1 Q Dr. Christensen, are you familiar with a woman
2 named Carolyn Berger?

3 A Not that I recall.

4 Q Let me represent to you that Ms. Berger is the
5 chief executive -- Chief Executive Officer of Diamond
6 State Telephone which is a Bell Atlantic subsidiary.

7 Would you accept that for the sake of this
8 question?

9 A Yes.

10 Q I want to read to you very briefly from some
11 testimony that I will also represent to you that
12 Ms. Berger gave in Delaware in March of this year.

13 I'm not asking you to accept that this is
14 accurate. I just want you to hear what she said because
15 I want to ask you a couple of questions about what it
16 might mean to you.

17 Ms. Berger was asked: Ms. Berger, I want to
18 direct your attention to the third page where it shows
19 the TPI in 1992 for Bell Atlantic for central office
20 equipment at 149. Do you see that?

21 The answer was: Yes, I do.

22 And the question said: Does this reflect a
23 49 percent increase in the cost of that plant since
24 1984?

25 And the answer was: Mr. Collins, I wish I
26 knew how this was calculated, but I would presume that
27 one possibility of the way it's calculated is in looking
28 at the total dollars that the company is spending on

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1 central offices. And so therefore, it wouldn't be that
2 the cost per unit has gone up but perhaps -- and again,
3 I'm speculating because I don't know how it's
4 calculated -- perhaps it's the number of dollars that we
5 are committing to central office modernization has gone
6 up.

7 And then she was asked: I do not understand
8 this to be a price index with the year '84 being the
9 base year.

10 And she answered: I don't know how it's
11 calculated. I don't know if it's the total costs that
12 we put in that category or if it's the cost per piece of
13 switching equipment or how that index is derived. But I
14 know in Delaware we have done a good deal of central
15 office switching updates over the last couple of years
16 so that our total costs for central offices would go up
17 although our unit cost has gone down.

18 Now having heard that testimony, and assuming
19 for the sake of this question that that is the testimony
20 that Ms. Berger gave in March of 1995 in Delaware, is it
21 possible in your view that when Bell Atlantic provided
22 this TPI data to you and to the BLS it misunderstood
23 what was being asked for and provided data about total
24 expenditures as opposed to unit price?

25 MR. SASSER: Objection. Calls for speculation.

26 MR. FABER: He already told us about his 30 years
27 of economic experience. All I'm asking him is if it's
28 possible in his view that Bell Atlantic misunderstood

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1 based on the fact that their numbers were so different
2 and the statement here by Ms. Berger, which I'm asking
3 him to assume is true, that their prices -- I mean,
4 their expenditures went up while their prices went down.

5 ALJ REED: Doctor, if you can answer it, please
6 do. If not --

7 THE WITNESS: Well, the testimony that I just heard
8 read she says she didn't know how those were computed.
9 So that really doesn't help. That's all. She was
10 speculating as to how it may be computed.

11 As to whether it's possible that Bell Atlantic
12 made a mistake in responding to this data request, most
13 anything is possible. We're all fallible as human
14 beings.

15 But I think the number of times they were
16 asked to double check it and said they did double check
17 it, I think that's unlikely.

18 MR. FABER: Q What do you make of their
19 assertions -- again, assuming that they said this in the
20 last couple of years -- our total costs for central
21 office have gone up but our unit costs have gone down?

22 Do you consider that could be inconsistent
23 with this 49 percent increase found in the TPI?]

24 A Well, this series does not show a unit cost of
25 central office equipment going down, and all I can say
26 is that I would think that the accounting people who
27 are -- were charged with coming up with an accurate TPI
28 I would suspect are better informed on the topic than

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1 was the person responding to those questions that said
2 she didn't know how it was computed.

3 Q Dr. Christensen, I'm going to turn now to the
4 information that begins on page 10 of Exhibit No. 9.

5 The very first item is -- actually can I have
6 a moment, your Honor.

7 ALJ REED: Yes.

8 MR. FABER: I just want to make sure I am making
9 the right reference.

10 Thank you.

11 MR. GOLABEK: Are we off the record, your Honor?

12 ALJ REED: Off the record.

13 (Off the record)

14 ALJ REED: On the record.

15 MR. FABER: Let me make one correction for the
16 record.

17 When I was asking Dr. Christensen about the
18 corrected TPIs in Exhibit No. 9, I referenced the
19 composite, because the page that's headed Corrected TPIs
20 and the next, which is headed Telephone Plant Indexes
21 for Bell Atlantic, and I think I said that the Bell
22 Atlantic information was on page 17 and the composite
23 was on the prior page 16.

24 It appears that in fact the Bell Atlantic is
25 on page 18 and the corrected composite is on page 17.

26 I apologize for the lack of clear numbers on
27 this.

28 Q Dr. Christensen, you do understand which

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1 documents I was referring to in those questions,
2 correct?

3 A Yes, I do.

4 Q All right. Let me turn to the issue of
5 corrections to gross capital stock which we talked about
6 briefly earlier, and to that do begin on the fourth page
7 of Exhibit 9.

8 Do you have that in front of you?

9 A Yes.

10 Q What is the purpose of including the 1984
11 capital stock values in your TFP study?

12 A This is a -- this is an important part of
13 computing the capital input for the LECs as part of the
14 total factor productivity study.

15 Q Why is it important?

16 A Well, because the capital input is -- the
17 starting point for capital input is capital stock and
18 the various items of capital stock in each year are
19 weighted by what Dr. Schmalensee was calling yesterday
20 the user cost, if you like.

21 Another way to describe that is the implicit
22 rental cost. That is, our economists who are doing
23 productivity studies arrive at the capital input
24 figure.

25 Q Are the values for capital stock based on
26 original cost or reproduction cost?

27 A They are based on original cost.

28 Q Can you explain the difference between

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1 original cost and reproduction cost?

2 A Sure. Original cost is what a piece of
3 capital equipment is on the books for, basically what it
4 was acquired for, whereas reproduction cost is the cost
5 that it would take to replace it.

6 Q And in your statement that these numbers that
7 were included in your TFP study are based on original
8 cost, how do you know that?

9 A Well, that's my best recollection of what --
10 how these numbers were computed.

11 Q Would you normally expect an LEC gathering
12 this type of data for a TFP study of the type you did to
13 gather this material on the basis of original cost or to
14 provide it on the basis of reproduction cost?

15 A Well, in their accounting records it would be
16 original cost. Those would be actual figures.

17 To get reproduction costs would be an estimate
18 of some sort.

19 Q Was the economic rent that you calculated for
20 the 1984 capital based on the original cost or the
21 reproduction cost of the capital stock?

22 A Well, the user cost isn't -- that's a separate
23 computation.

24 The user cost reflects the interest rates, it
25 reflects the depreciation, it reflects tax rates.

26 It's a price that is computed, an implicit
27 price or user cost for capital, which is then applied to
28 the capital stock that was existing in 1984, and

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1 similarly for each subsequent year.

2 That's the way a total factor productivity
3 study is done.

4 Q And that calculation of user cost and the
5 application of it to the capital stock value was done by
6 you at your company?

7 A That's correct.

8 Q Was the 1984 capital -- gross capital stock
9 provided by the LECs gross or net of depreciation?

10 A It's gross of depreciation.

11 Q Now, you told us earlier today that the
12 corrected data found in this represents a portion of the
13 total data that you used of gross capital stock, is that
14 right?

15 A I'm not sure I understand the question.

16 Q Well, as I think we went through, five of the
17 LECs provided corrected data and they're included in
18 Exhibit 9, but you relied on data from nine LECs, is
19 that right?

20 A That is correct.

21 Q You said also that you couldn't verify this
22 from Form M because this data is not found in Form M?

23 A I don't believe I said that.

24 In terms of I think the -- I think gross --
25 basically this would be gross investment figures would
26 be in Form M. I'm not positive of that.

27 Q Could you check that during the break and let
28 us know?

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1 A Sure, sure.

2 MS. BURDICK: Speaking of breaks your Honor, I hate
3 to be a wimp, but is there a chance that we could break
4 sometime soon.

5 ALJ REED: I was just waiting for Mr. Faber to take
6 a breath.

7 (Laughter)

8 THE WITNESS: Waiting for some wimp to speak up,
9 right?

10 (Laughter)

11 MR. FABER: This is a fine place for me.

12 MS. BURDICK: Thank you, Mr. Faber.

13 ALJ REED: Okay. Why don't we take a ten-minute
14 break.

15 (Recess taken)

16 ALJ REED: On the record.

17 MR. SASSER: Your Honor, Dr. Christensen was asked
18 to check a couple of items on the break, and I believe
19 he has responses for those.

20 THE WITNESS: Let's see. The first question was
21 with respect to the timing, or what conversations or
22 interactions took place after the Bureau of Labor
23 Statistics corrected their total factor productivity
24 study in the summer of 1994.

25 The question was did I have any communication
26 with the FCC about that, and the answer is I did not
27 personally.

28 I had communications with the USTA about the

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1 correction, about the update, and so they knew about
2 it. But I have no knowledge as to what form and if any
3 communication between the USTA and FCC took place with
4 regard to that update.

5 ALJ REED: Okay.

6 THE WITNESS: In addition, the question was asked
7 just before the break about the -- whether the gross
8 capital stock figures that I've used here and that
9 appear in this Exhibit 9 appear in Form M, and the
10 answer is no, and the reason it's no is because I
11 misspoke.

12 If in fact this were original cost, as I
13 described it, it would appear in Form M. But this, in
14 fact, is not original cost.

15 It's reproduction cost, or current cost of the
16 capital stock as computed by each of the LECs, and that
17 does not appear in the Form M.

18 ALJ REED: Thank you.

19 MR. FABER: Q Thank you very much, Dr.
20 Christensen.

21 That, unfortunately, is going to prolong the
22 questioning by a few minutes. But let me ask you this
23 very briefly.

24 You said you advised the USTA of the changes
25 made in the summer 1994.

26 Do you recall when you advised the USTA of
27 that change?

28 A Immediately after it took place.

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1 Q You did not update your study until the
2 January update, January 1995?

3 A I didn't file a new study until January, that
4 is correct.

5 Q Do you know if the USTA indicated that change
6 in information to the FCC?

7 A I do not.

8 Q Back to the issue, then, of capital stock, and
9 I'll try to go through this as quickly as I can.

10 Referring, then, to items that begin on page 4
11 of Exhibit 9, your statement is that these items of 1984
12 gross capital stock, both the composite and the five
13 LECs that are included, constitute reproduction costs.

14 A Yes.

15 Q Do you know how the reproduction costs for
16 each of these capital stock figures was calculated?

17 A Well, I know that the -- each of the LECs was
18 asked to compute a reproduction cost of capital, and
19 that they did it by applying a current cost to original
20 ratio to the gross capital stock original cost as it
21 appeared on their books.]

22 Q Do you know who developed those ratios?

23 A I do not.

24 Q They weren't developed by anyone at your
25 company?

26 A That's correct.

27 Q Do you know how the ratios were developed?

28 A The -- as I said, each of the companies was

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1 asked to take their original cost -- gross capital stock
2 figures on their books and to gross it up by using
3 a ratio of current replacement cost to original cost.

4 Q And each of the LECs determined on their own
5 what the current replacement cost would be?

6 A That's correct.

7 Q Do you know what specific technology
8 assumptions were used by each of the LECs in calculating
9 the reproduction costs?

10 A I do not.

11 Q You didn't provide any assumptions for them
12 to use in making these calculations?

13 A That's correct.

14 Q Now, can you tell us whether all of the LECs
15 performed these calculations of converting the book cost
16 to reproduction cost in a consistent way?

17 A Well, they all had the same -- the same
18 instructions as to how to compute it as they did
19 for all the other items of data that were requested
20 by the Bureau of Labor Statistics.

21 Q But you didn't know, for example, what
22 technology assumptions they were going to make, did you?

23 A I'm not sure what you mean by technology
24 assumptions.

25 Q Well, for example, the nature of the plant
26 that would be used for a total current replacement?

27 A That's correct; I don't know.

28 Q And so you don't know if one LEC used one set

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1 of assumptions for replacement plant and if another LEC
2 used a different set, do you?

3 A That's correct.

4 Q Now, did you review the LECs' reproduction
5 cost calculations, or did you simply utilize the
6 resultant figures that the LECs provided to you?

7 A Well, I reviewed the figures that were
8 provided, and the figures looked reasonable.

9 We, again, as we did with all items of
10 capital -- sorry -- we asked the LECs to double-check
11 the data to make sure that they were following
12 the requested procedures, and that in fact the data
13 were accurate; and we were assured that that was
14 the case.

15 Q But I thought you said a moment ago that
16 you didn't provide a specific procedure for them
17 to calculate production costs, for example, with respect
18 to technology assumptions?

19 A No. What I said was they were asked to take
20 the gross capital stocks on their books and to gross
21 those up to -- so they would represent the reproduction
22 cost -- the current replacement cost of the capital
23 on their books. But in terms of the specific details,
24 I do not know how they did that.

25 Q Do you know if the LECs took the existing
26 stock of capital equipment and reprice it at the
27 then-current cost, or did they re-engineer their
28 networks and then price that out at the current cost

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1 for the new technology?

2 A It is my understanding that they did
3 the former.

4 Q That is all they did was reprice their
5 existing capital stock at the then-current prices?

6 A Yes, it is my understanding that that was
7 the request by the Bureau of Labor Statistics, that
8 that is what they should do.

9 Q Turn, if you will for a moment, to Exhibit 9,
10 page 7, which is the corrected capital stock data
11 for NYNEX.

12 Do you see that?

13 A Yes.

14 Q Now, at the top of that page you show the
15 corrected data for NYNEX for 1984 gross capital stock in
16 six different categories, right?

17 A Yes.

18 Q And below that you show the original data that
19 NYNEX had provided in those same six categories,
20 correct?

21 A That's correct.

22 Q And at the bottom, you show the difference
23 between the two sets of categories; is that right?

24 A Yes.

25 Q I'm sorry?

26 A Yes, that's correct.

27 Q Now, I note that in the original category,
28 if you were to add up the total capital stock shown

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1 there, it would be in the \$37-, \$38-billion range;
2 is that right?

3 A I can't say.

4 Q Would you just check and make sure that that's
5 about right?

6 A What was the figure?

7 Q I said 37 to 38. Maybe 37 to 39.

8 A That looks about right.

9 Q If you look at the corrected amount at the
10 bottom -- I'm sorry -- the difference, you'll see that
11 there were reductions of something on the range of
12 \$12- or \$13 billion.

13 Do you see that?

14 A Yes.

15 Q Have you considered the fact that NYNEX
16 originally reported one number in the \$38-billion range
17 and then reduced it by some \$12- or \$13 billion to be
18 a significant correction?

19 A Yes, I do.

20 Q Did you go and try and understand the basis
21 for why NYNEX made this correction?

22 A Well, we asked what were the bases for the
23 correction, and they said that there was -- there had
24 been a misunderstanding in terms of what it was supposed
25 to be the first time, and that now the figures that were
26 provided for the update in fact matched the -- now
27 matched the instructions from the Bureau of Labor
28 Statistics, whereas the previous ones did not.

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1 Q Now, what was the nature of the
2 misunderstanding that NYNEX had when it provided the
3 wrong numbers the first time?

4 A Well, I can't recall any specific details,
5 but to kind of give a broad picture of what the
6 challenge was here, the -- it is a substantial task
7 to translate accounting numbers into economically
8 meaningful numbers for a total factor productivity
9 study, and the LECs had not been requested to do this
10 previously, and there's some learning going on.

11 Some people who made mistakes the first time
12 through did them better. Or, in some cases, there was
13 a different individual who was doing it for the update,
14 and upon checking, determined that the information that
15 had been provided for the original study was in fact
16 not directly responsive to the request by the Bureau of
17 Labor Statistics.

18 Q If you had not been provided the corrected
19 data in the November-December 1994 time frame for
20 NYNEX's capital stock, wouldn't that have had
21 a significant impact on your study?

22 A No.

23 Q Why is that?

24 A Well, as you suggested, the revision is
25 significant for NYNEX, but NYNEX is a sufficiently small
26 part of the whole study. It would have had a de minimis
27 effect on the total factor productivity.

28 Q Well, there's corrections for five of the nine

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1 LECs that you studied; isn't that right?

2 A Yes.

3 Q And are you saying that each of them is
4 de minimis in the relative impact to the total amount?

5 A Yes. In fact, as we see, all of these --
6 all of these changes had the impact of 2/10ths of
7 1 percent on the total factor productivity number, which
8 I would say was -- well, obviously, it's insignificant
9 compared to the magnitude of the change that was made
10 by the Bureau of Labor Statistics in its own total
11 factor productivity study.

12 So I think that the fact that there's 2/10ths
13 of a percent difference and the updated data were
14 verified as being the correct data, I think that
15 that is a very good, good finding.

16 There certainly are much bigger changes in
17 updating other studies that economists do on a routine
18 basis. So I think that supports the -- supports
19 the study.

20 Q Who verified that the updated data were
21 correct?

22 A The -- well, as we've discussed at length
23 this morning, it is a combination of -- well,
24 specifically, in testimonies of the detailed data,
25 it was the LECs themselves; and in some cases,
26 in response to questions by me and my staff, in terms of
27 whether the data, in fact, reflected what -- what was
28 intended.

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1 Q Do you, sitting here, know today that NYNEX
2 now has gotten it right, and that these data are now
3 correct?

4 A I can't say that with perfect certainty, no.

5 Q If I were to look at the value of Pacific's
6 1984 rate base, as is reported to the CPUC or to the
7 FCC, can you just briefly describe how I would transform
8 that into the 1984 capital stock number used in your
9 study?

10 A Well, it would be a matter of taking the --
11 taking each item of capital stock by the categories
12 shown here and estimating what it would take to replace
13 that stock with stock of the same type at today's prices
14 or at whatever period one is looking at.

15 Q Now, you said that the changes in the capital
16 stock resulted in a .2 percent change in the TFP result;
17 is that right?

18 A No, that's not right.

19 Q Well, I'm sorry; that's what I thought
20 you said a moment ago.

21 A No. I said all of the changes -- all of the
22 changes in total, all of the corrections that were made,
23 some of them resulted in a 2/10ths of 1 percent change,
24 approximately.

25 Q Is it correct that changes in the capital
26 stock values will move in the same direction as changes
27 in the TFP result -- vice-versa; I'm sorry -- is it
28 correct that the changes in the TFP result will move

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1 in the same direction with changes in the capital stock
2 values?

3 A No, they'll tend to move in the opposite
4 direction.

5 Q If you lower the 1984 base values for
6 the capital stock, all other things being equal,
7 won't that cause the TFP to go down?

8 A No, you can't say that.

9 Q Why is that -- why is that not true?

10 A Because the 1984 gross capital stock is only
11 one part of the computation for getting capital stock
12 for each and every one of the years. But, in general,
13 if capital stock goes down, total factor productivity
14 goes up.

15 Q If the gross capital stock for 1984 goes down,
16 then there is a greater increase in the covered time
17 period than before; isn't that right? In capital
18 stock.

19 A With a lower base period, capital stock --
20 with the same investment figures, the capital stock
21 would tend to grow at a somewhat more rapid rate,
22 which would have a tendency to lower the rate of growth
23 of total factor productivity.

24 Q Now, turn to page 2 of your Exhibit No. 6,
25 which is your direct testimony -- I'm sorry -- not
26 page 2 of the testimony, but page 2 of the report,
27 which doesn't have an appendix number.

28 Do you have that page in front of you?